



<b>Licence Number</b>	L8176/2007/3
<b>Licence Holder</b>	Holcim (Australia) Pty Ltd
<b>ACN</b>	099 732 297
<b>File Number:</b>	DER2015/001870-1
<b>Premises</b>	Baldivis Sand Quarry 1340 Stakehill Road Baldivis WA 6171  Legal description – Mining Tenement: M70/1241
<b>Date of Amendment</b>	22/07/2019

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act), as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

## Rebecca Kelly

### A/Senior Manager, Resource Industries

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA).

## Definitions and interpretation

### Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
Amendment Notice	means an amendment granted under s.59 of the EP Act in accordance with the procedure set out in s.59B of the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation.
EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited only to an amendment for Category 12.

The following guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles* (July 2015)
- *Guidance Statement: Setting Conditions* (October 2015)
- *Guidance Statement: Decision Making* (February 2017)
- *Guidance Statement: Risk Assessment* (February 2017)

## Amendment description

The Licence Holder has applied to amend the following:

- the premises boundary;
- ambient dust monitoring program ahead of the commencement of Stage 1C and Stage 2; and
- the fugitive dust concentration limit.

### Premises Boundary

As per the Long Term Mining Agreement between Holcim and Landcorp, Holcim relinquished Stage 3W to Landcorp during 2017. Relinquishing Stage 3W sees the western portion of the mining tenement being removed from the premises boundary. Operations will be moving first to Stage 1C, where the location of the screening operation will be moved to three different areas (2, 6 and 7 see Diagram 2). Once Stage 1C has been completed, Holcim will move to Stage 2 and be located within Reserve R 38575, see Diagram 3.

The Premises Map in Schedule 1 of the current licence will be replaced with a map showing the new premises boundary.

Diagram 1 below shows a copy of the current premises map, including the locations of the current and planned ambient air monitors (AQ1 – AQ4). The shaded areas 2, 6 and 7 show the location of the screening machinery during various stages of operation. This map (Diagram 1) will be replaced due to the change to the premises boundary and related air monitor.

Diagram 2 below shows the new premises boundary along with the location of the screening operations (areas 2, 6 and 7) during Stage 1C extraction operations. As Stage 1C covers a large area of the premises, Holcim has provided three separate areas where they will be conducting screening operations during the life of Stage 1C. During stage 1C, the mobile screen will not operate outside these designated areas.

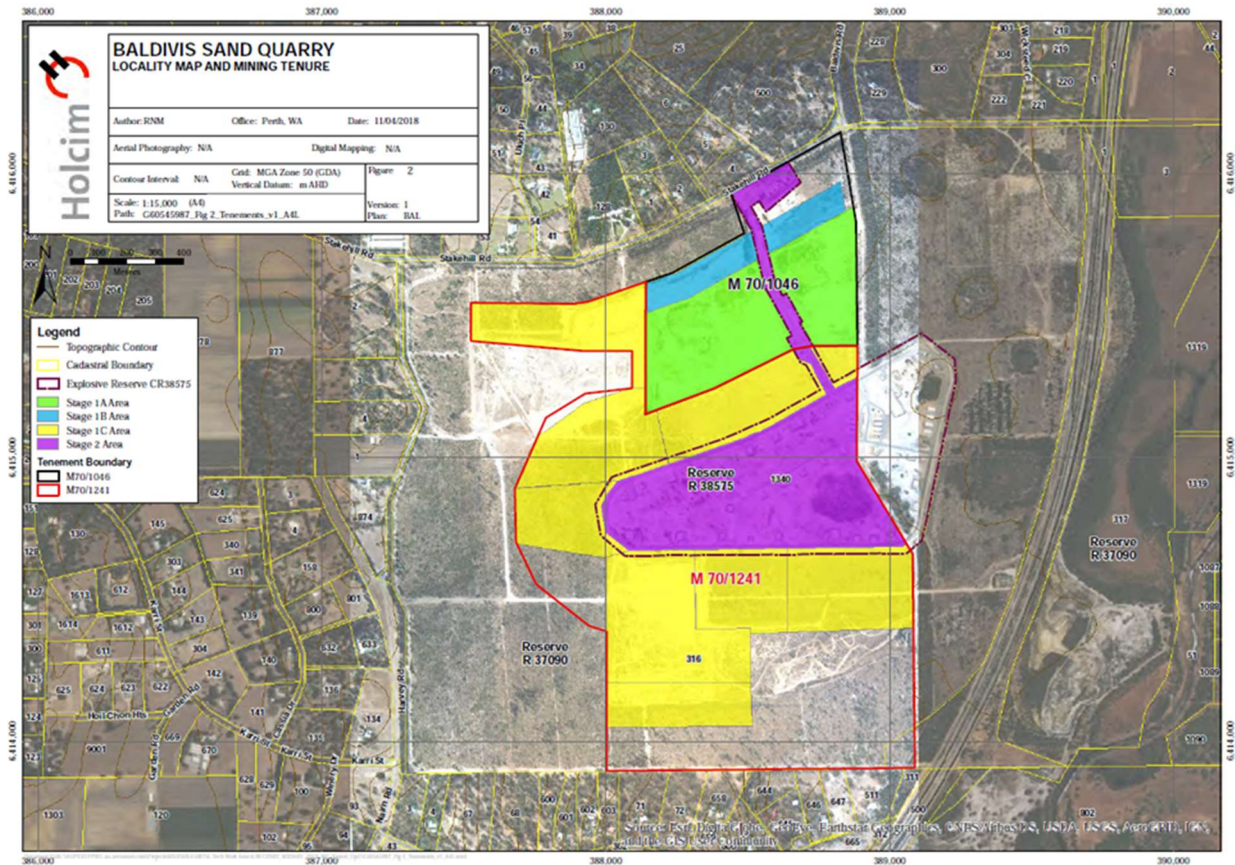
Diagram 3 below shows the current and future areas of extraction including the future Stage 1C and Stage 2 extraction areas.



Diagram 1: Current premises boundary and ambient air monitors



Diagram 2: New premises boundary, ambient air monitors and Stage 1C screening areas



**Diagram 3: Holcim planned stages of extraction**

### Ambient Dust Monitoring

Dust monitoring for the Licence was initially set up by the Licence Holder as part of Holcim's Dust Management Program and included onto the licence as part of a previous amendment.

The ambient air monitoring was established due to the close proximity of operations when the majority of screening was undertaken in the northern portion of the premises during Stage 1 (comprising of Stage 1A and 1B). Distances to the nearest receptor were 270 meters from operations during parts of Stage 1 activities. In the time operations commenced onsite in 2008, there has been one (1) exceedance of the National Environment Protection Measure for Ambient Air Quality (Air NEPM) for particles as PM10 ( $50 \mu\text{g}/\text{m}^3$ , 24 hour average) that has been attributed to activities on site and no recorded complaints about dust emissions from the operations.

### **Stage 1C operations**

The Licence Holder proposes with the commencement of Stage 1C (refer to Diagram 3) that ambient air monitoring requirements within the licence are amended.

It is proposed that ambient air monitoring site AQ1 (refer to Diagram 1) is removed. The Licence Holder has indicated that ambient air monitoring site AQ2 adequately covers the potential impacts to receptors on the northern boundary of the site during Stage 1C.

### **Stage 2 operations**

The Licence Holder proposes that following completion of Stage 1C and the commencement of Stage 2, that ambient air monitoring requirements within the licence are amended.

It is proposed that all ambient air monitoring locations are removed from the licence during Stage 2.

During Stage 2 the sand screen will be located in the centre of the premises. The Licence Holder has indicated that the separation distance to sensitive receptors will increase from 270 metres to over 900 metres, resulting in a risk reduction to dust events impacting on the nearest receptors.

### Fugitive Dust Concentration Limit

The Licence Holder has applied to amend condition 2.2.1 of the Licence. Condition 2.2.1 reads;

*The Licensee shall not cause or allow the concentration of PM<sub>10</sub> from operations to exceed 50 µg/m<sup>3</sup> (24-hour average) at the monitoring point reference AQ2.*

The Licence Holder seeks to change the Licence condition 2.2.1 limit of PM<sub>10</sub> from 50 µg/m<sup>3</sup> to 90 µg/m<sup>3</sup>. This will better reflect the lower potential risk of fugitive dust events at sensitive receptors as a direct result of changing operations at the premises.

There has been a number of exceedances of the ambient air limit since the site commenced operations in 2008. After investigating each exceedance, only 1 event was deemed to have been caused by Holcim operations on site. DWER records show that there has been no complaints about dust emissions from the operations since recording started in 2008. The Department of Regulation (DER) assessment of February 2016 identified the dwellings on the northern boundary of the premises to be of greatest risk of impact from potential dust emissions. This was from the relatively close proximity of the operations (270 metres) and when the prevailing easterly winds were present.

The initial PM<sub>10</sub> limit of 50 µg/m<sup>3</sup> (24-hour average) was put in place due to the close proximity of operations during the initial stages. As the screening operations will be moving away from AQ2 in a Southerly direction, there will be a lower risk of operations causing a dust event at sensitive receptors on the northern boundary. Licence condition 2.2.1 will be amended to 90 µg/m<sup>3</sup> (24-hour average) to reflect the lower risk to sensitive receptors.

## Amendment history

Table 2 provides the amendment history for L8176/2007/3.

**Table 2: Licence amendments**

Instrument	Issued	Amendment
L8176/2007/1	28/02/2008	New licence issued to CEMEX Australia.
L8176/2007/2	10/02/2011	Licence renewed. Issued to Holcim Australia.
L8176/2007/2	13/02/2014	Licence amended, to include the Stage 1B area and conversion to the new licence format.
L8176/2007/2	01/10/2015	Licence amended, to include the Stage 1C expansion and conversion to the current licence format.
L8176/2007/2	25/02/2016	Licence amended, to extend expiry date by 3 months, to allow for the public consultation period on the licence renewal.
L8176/2007/3	25/02/2016	Licence re-issue
L8176/2007/3	22/07/2019	Licence amendment to change the premises boundary, PM10 limit and ambient air monitoring.

## Location and receptors

Table 3 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment. Distance to receptors will be measured from the mobile screen during the proposed Stage 2 operations, as it is the main source of dust emissions.

**Table 3: Receptors and distance from active screen**

Residential and sensitive premises	Distance from Prescribed Premises
Lot 128 on Diagram 73707	900 m to the north of the proposed location of the crushing/screening operations for Stage 2.
Lot 4 on Diagram 54730	900 m to the west of the proposed location of the crushing/screening operations for Stage 2.

## Risk assessment

The risk assessment in Tables 4 and 5 below is undertaken for the proposed removal of all ambient air monitoring during Stage 2 construction and operations only.

Noise from Stage 2 operations will not be assessed in this Amendment Notice. In the original assessment of the Stage 1 operations, the assessment for noise was not an issue and Stage 2 will be further from receptors compared to Stage 1.

Tables 4 and 5 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.



**Table 4: Risk assessment for Stage 2 operations during construction**

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
Cat 12 Screening etc. of material	Mobilization of the screen operation for Stage 2	<b>Dust:</b> associated with vehicle movement	Sensitive receptors 900 m North and 900 m West of the screening operations at Stage 2.	Air	Health and amenity impacts	Minor	Rare	Low	Construction activities will be completed within a day. Any potential emission from construction activities will be adequately managed under general provisions of the Environmental Protection Regulations 1987.

**Table 5: Risk assessment for Stage 2 operations during operation**

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
Cat 12 Screening etc. of material	Operation of screening infrastructure for Stage 2	<b>Dust:</b> associated with screening operations	Sensitive receptors 900 m North and 900m West of the screening operations at Stage 2.	Air	Health and amenity impacts	Minor	Unlikely	Medium	Stage 2 operations will be situated over 900 metres from the nearest sensitive receptor. Current operations situated as close as 270 metres from the closest receptor has seen no significant dust impacts. As such, the Delegated Officer believes that the requirement to undertake ambient air monitoring during Stage 2 operations is not necessary and dust emissions can be adequately managed under general provisions of the Environmental Protection Regulations 1987.

## Decision

Conditions have been updated to reflect the following:

- a revised premises boundary map;
- removal of monitoring point AQ1 and the relocation of AQ3 to align with the revised premises boundary; and
- change of requirement to not exceed PM<sup>10</sup> emissions at AQ2 from 50 to 90 µg/m<sup>3</sup>.

The above changes align with requirements during Stage 1C.

No changes have been made regarding the proposed removal of all ambient air quality monitoring during Stage 2, although this document includes a risk assessment of the removal of the monitoring based on the location of receptors at this present time.

The Licence Holder should apply to DWER for an amendment to the licence prior to Stage 2 construction and operation to consider the amendment of conditions relating to the monitoring of ambient air quality. The context of the risk assessment outlined in Tables 4 and 5 of this document for Stage 2 is based on the closest sensitive receptors being located 900m from activities within the Premises. Any future development of land around the Premises and any changes to the location of sensitive receptors will be considered in determining the risks to the environment and public health and amenity from the operation of the Premises.

## Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 10/05/2019. No comments were received from the Licence Holder.

## Amendment

1. Condition 2.2.2 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in bold below:

The Licensee shall not cause or allow the concentration of PM<sub>10</sub> from operations to exceed ~~50~~**90**µg/m<sup>3</sup> (24-hour average) at the monitoring point reference AQ2 (as depicted in the Map of monitoring locations in Schedule 1).

2. Table 3.2.2 of the Licence is amended by the deletion of the text shown in strikethrough below:

Monitoring point reference	Parameter	Units	Frequency	Averaging period	Method
<del>AQ1</del> AQ2	PM <sub>10</sub>	µg/m <sup>3</sup>	Continuous <sup>1</sup>	24 hours	AS 3580.9.8
AQ3			Continuous <sup>1</sup> , whilst operating in Area 2		Not specified
AQ4			Continuous <sup>1</sup> , whilst operating in Areas 6 and 7		

Note 1: Availability ≥90% of the measurement interval on a monthly basis.

3. The Licence is amended by the deletion of the map in Schedule 1 titled "Premises map and map of monitoring locations" and by the insertion of the map shown below:

The Premises is shown in the map below. The ~~red~~ pink line depicts the Premises boundary. The location of the monitoring points listed in Table 3.2.2 are shown below.



## Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L8176/2007/3 – Holcim Baldivis Quarry	L8176/2007/3	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2	DER, July 2015. <i>Guidance Statement: Regulatory Principles</i> . Department of Environment Regulation, Perth.	NA	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
3	DER, October 2015. <i>Guidance Statement: Setting Conditions</i> . Department of Environment Regulation, Perth.		
4	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.		
5	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.		